

Atty Docket No. 020144-001930US

PTO FAX NO.: 1-703-746-9195

ATTENTION: Filing Receipt Division

Group Art Unit 1641

**OFFICIAL COMMUNICATION**  
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**FILING RECEIPT DIVISION**

**CERTIFICATION OF FACSIMILE TRANSMISSION**

I hereby certify that the following document(s) in re Application of Peter Wagner, et al. , Application No. 09/574,692, filed May 17, 2000 for ARRAYS OF PROTEIN-CAPTURE AGENTS AND METHODS OF USE THEROF is being facsimile transmitted to the Patent and Trademark Office on the date shown below.

Document(s) Attached

1. Request for Corrected Filing Receipt
2. Copy of Filing Receipt w/correction shown
3. Copy of Amendment as filed on March 8, 2004
4. Application Data Sheet (ADS)

Number of pages being transmitted, including this page: 15

Dated: 3/22/04 

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TOWNSEND and TOWNSEND and CREW LLP  
Two Embarcadero Center, Eighth Floor  
San Francisco, CA 94111-3834  
Telephone: 415-576-0200  
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60169223 v1

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PATENT  
Docket No.: 020144-001930US

TOWNSEND and TOWNSEND and CREW LLP

By: Lisa Kaiser

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

Peter Wagner, et al.

Application No.: 09/574,692

Filed: May 17, 2000

For: ARRAYS OF PROTEIN-CAPTURE  
AGENTS AND METHODS OF USE  
THEREOF

Examiner: Christopher L. Chin

Art Unit: 1641

REQUEST FOR CORRECTED FILING  
RECEIPT

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Attached is a copy to the official Filing Receipt received from the Patent and Trademark Office (PTO) in the above-noted application for which issuance of a corrected filing receipt is respectfully requested.

There is an error in the "Domestic Priority" section of the Filing Receipt. The Domestic Priority data should read as follows:

**--THIS APPLICATION IS DIV OF 09/353,555 7/14/99 NOW US  
PATENT NO. 6,329,209; WHICH IS A CONTINUATION-IN-PART OF CO-  
PENDING APPLICATION 09/115,455 7/14/98 NOW US PATENT NO. 6,406,921--.**

The requested correction is shown in red on the enclosed copy of the Filing Receipt. Also enclosed is a copy of the Amendment as filed in the PTO on

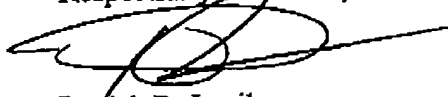
Peter Wagner, et al.  
Application No.: 09/574,692  
Page 2

PATENT

March 8, 2004 to amend the continuing data of the specification and an Application Data Sheet (ADS).

The Commissioner is hereby authorized to charge any fees or credit overpayment to the Deposit Account No. 20-1430.

Respectfully submitted,



Patrick R. Jewik  
Reg. No. 40,456

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60167901 v1

## FILING RECEIPT



\*OC000000005308008\*

UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark OfficeAddress: ASSISTANT SECRETARY AND  
COMMISSIONER OF PATENT AND TRADEMARKS  
Washington, D.C. 20231

APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLAIMS	IND CLAIMS
09/574,692	05/17/2000	1743	345	24406-0006	028	8	3

RECEIVED

William Schmonsees  
Heller Ehrman White & McAuliffe  
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Palo Alto, CA 94301-1900

AUG 24 2000

HEWM LLP - P.A.

Date Mailed: 08/09/2000

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the PTO processes the reply to the Notice, the PTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

## Applicant(s)

Peter Wagner, Belmont, CA ;  
Steffen Nock, Redwood City, CA ;  
Dana Ault-Riche, Palo Alto, CA ;  
Christian Ilin, Menlo Park, CA ;

## Continuing Data as Claimed by Applicant

THIS APPLICATION IS A DIV OF 09/115,455 07/14/1998 *09/353,555 7/14/99 Now*  
*US Patent No. 6,329,209; which is a continuation-in-part of co-Pending*  
 Foreign Applications *Application No. 09/115,455 7/14/98 Now US Patent No. 6,406,921*

If Required, Foreign Filing License Granted 08/08/2000

\*\* SMALL ENTITY \*\*

## Title

Arrays of protein-capture agents and methods of use thereof

## Preliminary Class

436

Data entry by : JORDAN, STANLEY

Team : OIPE

Date: 08/09/2000

W. Schmonsees / dkm

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Title 37, Code of Federal Regulations, 5.11 & 5.15**

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**PLEASE NOTE the following information about the Filing Receipt:**

- The articles such as "a," "an" and "the" are not included as the first words in the title of an application. They are considered to be unnecessary to the understanding of the title.
- The words "new," "Improved," "Improvements In" or "relating to" are not included as first words in the title of an application because a patent application, by nature, is a new idea or improvement.
- The title may be truncated if it consists of more than 600 characters (letters and spaces combined).
- The docket number allows a maximum of 25 characters.
- If your application was submitted under 37 CFR 1.10, your filing date should be the "date in" found on the Express Mail label. If there is a discrepancy, you should submit a request for a corrected Filing Receipt along with a copy of the Express Mail label showing the "date in."

Any corrections that may need to be done to your Filing Receipt should be directed to:

Assistant Commissioner for Patents  
Office of Initial Patent Examination  
Customer Service Center  
Washington, DC 20231

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Fax No. 1-703-872-9306 on 3/18/04.

PATENT  
Attorney Docket No.: 020144-001930US

TOWNSEND and TOWNSEND and CREW LLP

By: 

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

Peter Wagner, et al.

Application No.: 09/574,692

Filed: May 17, 2000

For: ARRAYS OF PROTEIN-CAPTURE  
AGENTS AND METHODS OF USE  
THEROF

Customer No.: 20350

Confirmation No. 8762

Examiner: Christopher L. Chin

Technology Center/Art Unit: 1641

AMENDMENT

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to the Office Action mailed on September 11, 2003, please enter the  
following amendments and remarks:

**Amendments to the Specification begin on page 2 of this paper.**

**Amendments to the Claims are reflected in the listing of claims which begins on page 3 of this  
paper.**

**Remarks/Arguments begin on page 5 of this paper.**

Appl. No. 09/574,692  
Amdt. dated March 8, 2004  
Reply to Office Action of September 11, 2003

PATENT

**Amendments to the Specification:**

Please amend the first paragraph of the application as follows:

This application is a divisional of Serial No. 09/353,555, filed on July 14, 1999, now U.S. Patent No. 6,329,209, which is a continuation-in-part application of co-pending application Serial No. 09/115,455, filed July 14, 1998, now U.S. Patent No. 6,406,921, which is are incorporated herein by reference in ~~its~~ their entirety.

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Amdt. dated March 8, 2004  
Reply to Office Action of September 11, 2003

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claims 1-52. (canceled)

Claim 53. (currently amended) ~~The biochip of claim 51~~ A biochip for displaying attached polynucleotides comprising:

(a) a substrate having an oxide or nitride surface; and

(b) an ordered hydrocarbon monolayer formed from first alkyl chains, said first alkyl chains having proximal and distal ends, said first alkyl chains interacting with each other to form said ordered hydrocarbon monolayer, said ordered hydrocarbon monolayer being attached to said surface through one or more silane residues on each of said first alkyl chains' proximal ends, said first alkyl chains' distal ends each having a functional group capable of covalently attaching a polynucleotide to said first alkyl chain,

wherein the biochip further comprising comprises one or more border regions separating two or more of said immobilization regions to form two or more spaced apart immobilization regions.

Claim 54. (canceled).

Claim 55. (currently amended) ~~The biochip of claim 54~~ A biochip for displaying attached polynucleotides comprising:

(a) a substrate having an oxide or nitride surface; and

(b) an ordered hydrocarbon monolayer formed from first alkyl chains, said first alkyl chains having proximal and distal ends, said first alkyl chains interacting with each other to form said ordered hydrocarbon monolayer, said ordered hydrocarbon monolayer being attached to said surface through one or more silane residues on each of said first alkyl chains' proximal



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ends, said first alkyl chains' distal ends each having a functional group capable of covalently attaching a polynucleotide to said first alkyl chain,

wherein said ordered hydrocarbon monolayer is formed from a ratio of said first mentioned alkyl chains having a first mentioned functional group for attaching polynucleotides, and second alkyl chains, said second alkyl chains having proximal and distal ends, said alkyl chains interacting with each other to form said ordered hydrocarbon monolayer, said ordered hydrocarbon monolayer being attached to said surface through one or more second silane residues on each of said second alkyl chains' proximal ends, and

wherein said ordered hydrocarbon monolayer is made from two or more different kinds of molecules ~~molecular species.~~

Claim 56. (currently amended) The biochip of claim 56 ~~55~~ wherein said functional group is one of hydroxyl, carboxyl, amino, aldehyde, carbonyl, methyl, methylene, alkene, alkyne, carbonate, aryl iodide, or vinyl groups.

Claim 57. (currently amended) The biochip of claim 56 ~~55~~ wherein said functional group is a photoactivatable functional group.

Claim 58. (new) The biochip of claim 55 wherein the first alkyl chains are the same length.

Claim 59. (new) The biochip of claim 55 wherein the oxide or nitride surface is selected from the group consisting of silicon oxide, titania, tantalum oxide, silicon nitride, indium tin oxide, magnesium oxide, alumina, quartz, glass, and silica.

Claim 60. (new) The biochip of claim 55 wherein the first alkyl chains are from 8 to 22 carbons in length.

Appl. No. 09/574,692  
Amdt. dated March 8, 2004  
Reply to Office Action of September 11, 2003

PATENT

**REMARKS/ARGUMENTS**

This Amendment is responsive to the Office Action mailed on September 11, 2003. A petition for a 3-month extension of time is attached so that the due date is to and including March 11, 2004. Entry of this Amendment is requested.

In this Amendment, claims 57-60 are added. These claims are dependent claims and track the language of the previously submitted claims. Claims 55 and 57 are amended so that they are in independent form. Other claims have been amended to change their dependencies.

At page 2 of the Office Action, the Examiner states that the first paragraph of the application needs to be updated. In response, the first paragraph of the application has been updated. Applicants note that this application is a divisional application of Application No. 09/353,555, filed on July 14, 1999, which is a continuation-in-part application of Application No. 09/115,455, filed July 14, 1998. Withdrawal of the objection is requested.

At page 2 of the Office Action, the Examiner objects to the language in claims 46 and 55 and rejects these claims as indefinite.

With respect to claim 46, the Examiner states the recitation of "adapted for" is not clear as to how the functional group has been modified for covalent attachment to a polynucleotide.

In response, the language "adapted for" is omitted from independent claims 55 and 57 and the language "capable of" is used in its place.

With respect to claim 55, the Examiner states it is not clear what "molecular species" is being referred to.

In response, the words "molecular species" are omitted from independent claim 55.

As the indefiniteness rejections have been addressed, withdrawal of the same is requested.

Appl. No. 09/574,692  
Amdt. dated March 8, 2004  
Reply to Office Action of September 11, 2003

PATENT

At page 3 of the Office Action, the Examiner rejects claims 46-52, 54, 56, and 57 as anticipated by Barrett et al. At page 4 of the Office Action, the Examiner rejects claims 46-52, 54, and 56 over Sundberg et al.

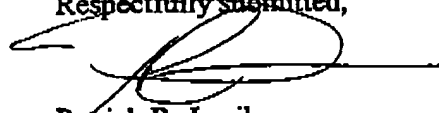
In response, Applicants have canceled the claims that are rejected over Barrett et al. and Sundberg et al. By canceling the rejected claims, Applicants do not admit that the rejections are proper, but are doing so to expedite the prosecution of the application.

Claims 53 and 55 were not rejected over prior art. Since these claims are put into independent form, and since the remaining claims are dependent claims, Applicants believe that this application is in condition for allowance.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,



Patrick R. Jewik  
Reg. No. 40,456

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**Application Data Sheet****Application Information**

Application number:: 09/574,692  
Filing Date:: 05/17/00  
Application Type:: Regular  
Subject Matter:: Utility  
Suggested classification::  
Suggested Group Art Unit::  
CD-ROM or CD-R??::  
Number of CD disks::  
Number of copies of CDs::  
Sequence Submission::  
Computer Readable Form (CRF)?::  
Number of copies of CRF::  
Title:: ARRAYS OF PROTEIN-CAPTURE AGENTS AND  
METHODS OF USE THEREOF  
Attorney Docket Number:: 020144-001930US  
Request for Early Publication:: No  
Request for Non-Publication:: No  
Suggested Drawing Figure::  
Total Drawing Sheets:: 8  
Small Entity?:: Yes  
Latin name::  
Variety denomination name::  
Petition included?:: No  
Petition Type::  
Licensed US Govt. Agency::  
Contract or Grant Numbers One::  
Secrecy Order in Parent Appl.: No

**Applicant Information**

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**Correspondence Information**

Correspondence Customer Number:: 20350

**Representative Information**

Representative Designation::	Representative Number::	Representative Name::
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Associate	40,456	Patrick R. Jewik

**Domestic Priority Information**

Application::	Continuity Type::	Parent Application::	Parent Filing Date::
This Application is a	Divisional of	09/353,555 now US Patent No. 6,329,209	7/14/99
which is a	Continuation-In-Part of	09/115,455 now US Patent No. 6,406,921	7/14/98

**Foreign Priority Information**

Country::	Application number::	Filing Date::
-----------	----------------------	---------------

**Assignee Information**

Assignee Name:: Zyomyx, Inc.  
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City of mailing address:: Hayward  
State or Province of mailing address:: CA  
Country of mailing address:: US  
Postal or Zip Code of mailing address:: 94545

Page 4

Initial 3/17/04